

**Before the
FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554**

ACCEPTED/FILED

JAN 17 2013

Federal Communications Commission
Office of the Secretary

In the Matter of)
)
LOS ANGELES REGIONAL INTEROPERABLE)
COMMUNICATIONS SYSTEM JOINT POWERS)
AUTHORITY)
)
Request for Waiver of Section 90.531(b)(2))

REQUEST FOR WAIVER

The Los Angeles Regional Interoperable Communications System Joint Powers Authority (LA-RICS), pursuant to Section 1.925 of the Commission's rules,¹ hereby requests a waiver of Section 90.531(b)(2)² and such other of the Commission's rules as is necessary to permit LA-RICS and its member public safety entities in the Los Angeles metropolitan area to apply for and obtain licenses for the 700 MHz "narrowband reserve channels" and integrate those frequencies into the LA-RICS radio system.³ The waiver is necessary to provide at least limited spectrum options for replacing frequency assignments in the 470-512 MHz band (a.k.a., "the T-Band"), which is subject to auction and displacement of public safety licensees as a result of recent legislation.⁴

¹ 47 C.F.R. §1.925.

² 47 C.F.R. §90.531(b)(2).

³ Pursuant to guidance from Commission staff, this Request for Waiver is being submitted directly with the Public Safety & Homeland Security Bureau.

⁴ Section 6103 of the Middle Class Tax Relief and Job Creation Act of 2012, Pub. L. No. 112-96, 126 Stat. 156 (2012) ("the Act").

I. Background

LA-RICS was formed by the City of Los Angeles, County of Los Angeles and more than 80 other municipalities and public sector entities. LA-RICS has been working on a new multi-agency, interoperable radio communications system that will serve the over 10 million residents of the Los Angeles metropolitan area, a population that is greater than 42 of the 50 states. As the Commission recognized over 26 years ago, the unique geography and population density of the Los Angeles area creates special communications issues, particularly for public safety:

The geographic area is expansive, with Los Angeles County covering an area of approximately 4000 square miles. The topography is diverse, ranging from seashore to valleys, to deserts, to 11,000-foot mountain peaks. Because of the climate and geologic conditions, the region is prone to natural disasters such as forest wildfires, floods, mud-slides, earthquakes, high winds, high waves and tornados. The County has the highest concentration of automobiles in the world along with a vast network of freeways (totaling more than 500 miles). As a major manufacturing center, the Los Angeles area has experienced industrial disasters, including fires and hazardous chemical spills. These factors, among others, place severe demands on agencies involved with public safety in and around Los Angeles County. Moreover, these factors coupled with the general spectrum congestion present in the Los Angeles basin, place heightened demands on public safety communications systems.⁵

The intervening years have brought increased population density, even greater demands on radio spectrum and, especially since 2001, and heightened concerns with homeland security. The Los Angeles area is the home of the two busiest ports in the nation (Los Angeles and Long Beach), one of the world's busiest airports (LAX), sensitive military and industrial facilities, and other high profile targets throughout the area. All of these factors have placed tremendous strain on existing public safety communications networks.

One of the greatest challenges facing public safety communications in the region is the unusually large number of independent cities and public safety departments serving the area.

⁵ Amendment of Parts 2, 73, and 90 of the Commission's Rules and Regulations to Allocate Additional Channels in the Band 470 - 512 MHz for Public Safety and Other Land Mobile Services, 59 RR 2d 910 (1986).

There are 50 local law enforcement agencies and 31 local fire departments, many of which cover relatively small, but densely populated, geographic areas. LA-RICS was created with the vision of establishing a single communications platform that will provide instantaneous interoperability across agencies when responding to diverse emergencies, and eliminate the duplication of costs and effort involved in maintaining separate radio systems for each agency. LA-RICS will support a total user population of more than 34,000 first responders and up to 17,000 secondary responders.

II. The 470-512 MHz Band

LA-RICS had been planning for the voice communications platform to operate in portions of the 470-512 MHz band (a.k.a. “the T-Band”), which has long been the principal frequency band for Los Angeles area public safety agencies.⁶ The spectrum at 482-488 MHz is allocated exclusively for public safety in Los Angeles⁷ and provides the core spectrum for the Los Angeles County Sheriff’s Department and other agencies’ communications systems. Portions of 470-476 MHz and 506-512 MHz are also assigned to public safety agencies in the region. Pursuant to a waiver, the County of Los Angeles also has licenses to operate a new public safety system in 476-482 MHz as part of LA-RICS.⁸ Building a new communications system in 470-512 MHz has the obvious advantage of allowing for use of existing frequencies, infrastructure and radios, which will reduce costs and retain interoperability throughout system deployment.⁹

⁶ See South Bay Regional Public Safety Communications Authority, *Memorandum Opinion and Order*, 13 FCC Rcd 23781, 23797 (1998), at ¶ 37.

⁷ 47 C.F.R. §90.311.

⁸ County of Los Angeles, *Order*, DA 08-2823, 23 FCC Rcd 18389 (2008) .

⁹ The LA-RICS Joint Powers Agreement requires its members to enter into spectrum sharing agreements with LA-RICS pursuant to Section 90.179 of the Commission’s rules.

Moreover, the 470-512 MHz band is the only currently available frequency band with adequate public safety spectrum. The Commission previously recognized that there are not sufficient 700 MHz narrowband channels currently allotted and available for licensing in Los Angeles County to accommodate the LA-RICS system.¹⁰ The 800 MHz band is not an option as it is already very heavily used in Southern California, especially in surrounding counties, which prevents significant further reuse, and all potentially available 800 MHz public safety channels have already been assigned and are being used in Los Angeles County.¹¹ Nor, are there available channels in other public safety land mobile radio frequency bands.¹² The 700 MHz broadband network being deployed by the FirstNet is not a viable replacement for the 470-512 MHz band as the broadband network is still years from being deployed. Moreover, it will not provide push-to-talk, mission-critical voice communications in the foreseeable future.

The passage of Section 6103 of the Middle Class Tax Relief and Job Creation Act of 2012 created a huge, unanticipated hurdle for LA-RICS. Section 6103 requires that the Commission auction 470-512 MHz spectrum used by public safety licensees within nine years of the Act (*i.e.*, by 2021) and that incumbents vacate the band within two years thereafter (*i.e.*, no later than 2023) to make way for new commercial users. LA-RICS has therefore spent considerable time and effort in recent months exploring how it can best proceed with the prospect of losing its primary spectrum resource within 11 years. LA-RICS must deploy a new system, notwithstanding Section 6103, as its members' current systems need to be upgraded to

¹⁰ County of Los Angeles, *supra*, note. 7.

¹¹ The 800 MHz rebanding process has not begun in Southern California due to earlier delays in obtaining an international agreement between the U.S. and Mexico. LA-RICS also estimates that very few new 800 MHz channels will become available in the Los Angeles area once rebanding is completed at some point in the future.

¹² County of Los Angeles, *supra*, note. 7.

replace aging equipment, provide greater efficiency, add capabilities, and promote interoperability across the region.

III. The Hybrid 470-512 MHz/700 MHz Narrowband Approach

LA-RICS has determined that, absent repeal of Section 6103, the only viable approach is to deploy a hybrid 470-512 MHz/700 MHz narrowband system. This would provide a logical path to operate a full public safety grade communications system in both bands, and allow for a gradual migration from 470-512 MHz within the time period required by the Act. It also provides flexibility in the event that the statute is modified in the future to allow public safety licensees to remain in the band.

The hybrid approach will have both 470-512 MHz and 700 MHz narrowband frequencies co-located at each site, sharing common infrastructure with virtually identical system coverage for both frequency bands. This provides several major benefits. First, providing identical system coverage throughout the County will allow users operating on a 470-512 MHz talk group to communicate with users on the same talk group operating in the 700 MHz spectrum. Second, a dual-band design will enhance regional interoperability by tying together the extensive base of legacy 470-512 MHz operations and the newer 700/800 MHz systems in nearby areas.¹³ Third, dual-band design will allow LA-RICS users a gradual migration path from 470-512 MHz to 700 MHz without the need to replace all of their subscriber equipment at one time.

¹³ To address interoperability with surrounding agencies, the following is included in the system design: (a) direct communications from 700/800 MHz subscribers to surrounding agencies operating on 800 MHz; (b) direct communications from T-Band subscribers to surrounding agencies operating on T-Band or standard UHF, (c) system patches are available at the console level for non-LA-RICS systems, (d) system patches to a talk group will be heard on both LA-RICS frequency bands; (e) ISSI interface to agencies operating on P25; (f) gateways have been specified for agencies operating on other disparate spectrums or technologies, (g) several LA-RICS agencies have elected to use multi-spectrum subscribers where needed for their operations, and (h) all federal interoperable channels will be implemented throughout the County to provide communications for out of area first responders.

However, the hybrid system requires more 700 MHz narrowband channels than are currently available, either in the interim, while 470-512 MHz is still available, or in the long term if public safety is forced to relinquish 470-512 MHz as required by current law. LA-RICS estimates that the hybrid system will require all of the 470-512 MHz spectrum currently assigned to LA-RICS members, plus at least 100 channel paths of 700 MHz narrowband spectrum during initial stages of the system deployment. As the transition occurs over a number of years, substantially more 700 MHz narrowband channels will be needed as the 470-512 MHz band is phased out and users migrate to 700 MHz. LA-RICS estimates that its ultimate need, once the 470-512 MHz band is no longer available, will be approximately five hundred 700 MHz narrowband channel paths.¹⁴ That assumes, however, that all current data and non-critical voice communications can be moved from 470-512 MHz to the 700 MHz broadband system or other spectrum. Only mission-critical voice communication would be on 700 MHz narrowband channels.

IV. The 700 MHz Narrowband Reserve Spectrum

The 700 MHz narrowband spectrum currently available for licensing under the Commission's rules consists primarily of separate segments of 6.25 kHz channels for interoperability channels, state channels, and general use channels.¹⁵ As the Commission previously acknowledged, even if every currently-allotted 700 MHz narrowband channel were

¹⁴ The channel requirements for LA-RICS are based upon, (a) a complete computerized coverage analysis using prospective sites chosen by LA-RICS members with the following frequency saving measures considered: simulcast, P25 TDMA (Phase 2) operation, and frequency reuse; (2) a full computerized capacity analysis based on information collected from existing systems operated by LA-RICS members, current "best engineering practice" assumptions for calculating capacity of equivalent systems (used where current use information was unavailable), and a 25% critical event surge. The notional design indicated that the system could not be implemented with any less than 75 channel pairs. However, it did not address the issue of contiguous channels that cannot be used because of adjacent channel interference issues. The design was also unable to predict the final solution the chosen vendor will produce based on more stringent engineering and the use of their specific technology.

¹⁵ 47 C.F.R. §90.531(b).

somehow made available to LA-RICS, there would still be insufficient channels to accommodate all of the LA-RICS requirements.¹⁶ There is, however, an untapped source of 700 MHz narrowband channels, the 96 single 6.25 narrowband channels (48 channel pairs) that the Commission has been holding in reserve, pursuant to Section 90.531(b)(2). LA-RICS is requesting that all of those channels be made available for licensing in the Los Angeles area for use in the hybrid county-wide system and ultimately in the final system design once the 470-512 MHz band is no longer available. LA-RICS is also hopeful that some number of the 700 MHz narrowband channels already allotted to some of its member agencies pursuant to the Region 5 Regional Plan¹⁷ may also become available for use in the LA-RICS system.

Narrowband reserve channels in 700 MHz were first established in 1998 as part of the initial service rules for the 700 MHz band.¹⁸ At the time, there was still uncertainty regarding the specific demands and uses for various segments of the 700 MHz narrowband spectrum. Fourteen years have now passed without any further Commission proposals or orders regarding the potential use of the narrowband reserve channels. LA-RICS believes that the highest and best use of that spectrum in the Los Angeles area would be as part of the LA-RICS system, as a means of mitigating the impact of recent legislation regarding the 470-512 MHz band.

V. The Waiver Standard

Section 1.925(b)(3) of the Commission's rules allows it to grant a waiver if it is shown that either: "(i) the underlying purpose of the rules(s) would not be served or would be frustrated by application to the instant case, and that a grant of the requested waiver would be in the public

¹⁶ County of Los Angeles, *supra*, note 7.

¹⁷ A copy of the plan is available at <http://www.cpra.org/doc/Reference/700MHzPlanV.3.pdf>.

¹⁸ *First Report and Order* in WT Docket 96-86, FCC 98-191 (rel. Sept. 29, 1998).

interest;” or “(ii) in view of unique or unusual factual circumstances of the instant case, application of the rules(s) would be inequitable, unduly burdensome or contrary to the public interest, or the applicant has no reasonable alternative.”¹⁹

The apparent purpose of the relevant rule was to reserve certain narrowband channels to address future requirements. LA-RICS has presented just such a requirement. Thus, continuing to reserve the relevant channels in the Los Angeles area would be contrary to the original purpose of the rule and the public interest. LA-RICS is also facing unique and unusual factual circumstances. Just as LA-RICS embarked on a major, multi-million dollar project to provide interoperable communications across the Los Angeles area, Congress has unexpectedly adopted legislation that will take away the principal frequency band to be used in the new system. Under such circumstances, continuing to hold 700 MHz narrowband spectrum in reserve would be “inequitable, unduly burdensome” and “contrary to the public interest.” As discussed above, LA-RICS also has “no reasonable alternative” under current statutory provisions.

CONCLUSION

Therefore, for the reasons discussed above, LA-RICS requests that the Commission waive Section 90.531(b)(2) and such other of its rules as may be necessary to allow LA-RICS and its member agencies to apply for the 700 MHz narrowband reserve spectrum.

Respectfully submitted,

/s/

Ron Wong
Manager, Engineering/Technical
LA-RICS project
2525 Corporate Place, Suite 200
Monterey Park, CA 91754
(323) 881-8296

¹⁹ 47 C.F.R. §1.925(b)(3).